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ABSTRACT

This paper explores the relationship between declining socioeconomic indicators and school board incumbent defeat. The exploration examines the total sample of 66 districts using groups created from increase or decrease in indicator variables and board member defeat in 1967, 1969, and 1971 board elections; examines two groups (of 44 districts and 22 districts) using new decision rules concerning incumbents not seeking reelection and 1971 elections only; and discusses the results of these analyses. An appendix lists the indicators considered. (Author/IRT)

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Downward Trends in Socio-Econ-Political Indicators and Incumbent Defeat

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Earlier writings have explored the general applicability of the Iannaccone-Lutz framework to a non-random sample of 66 of New Mexico's 89 school districts. [1/] As was the case in most states, a review of the school enrollment figures and general census materials for New Mexico indicated considerable population mobility. Of the 66 districts in the sample, 41 had declining school enrollments in the 1960's. A review of the 1970 census for New Mexico showed that total population had declined in 17 of the state's 32 counties. In 14 predominantly rural counties this population loss was five per cent or more. In incorporated places of 1,000 or more inhabitants, 21 lost five per cent or more of their population while 17 had a five per cent or more increase. Generally, larger cities increased while smaller towns or villages lost inhabitants. Such a pattern of mobility paralleled the national experience in which roughly one-half of all counties lost population in the 1960's.

The general intent of this paper is an exploration of the relation of declining socio-economic indicators and incumbent defeat. This exploration proceeds as follows: (1) an examination of the total sample of 66 districts using groups created from increase or decrease in indicator variables and board member defeats in 1967, 1969 and 1971 school board elections; (2) an examination of two groups, 44 districts and 22 districts, using new decision rules concerning incumbents not seeking reelection and 1971 elections only; and, (3) a discussion of the results of these analyses.

The Analyses of 66 Districts

The initial data analyses were based on the entire sample of 66 school districts. The districts were grouped on the basis of: (1) increase or decrease in indicator variables and (2) no board member defeat or one or more board member defeats in 1967, 1969, and 1971 school board elections. In

the case of decrease in indicators, the decision rule employed was that a negative sign in the raw score of any two or more of the 11 socio-economic indicators of a district constituted grounds for assignment as a decreasing indicator district. (Indicator variables are listed in Appendix A.) Overall, 41 districts were designated as decreasing indicator districts and 25 districts were assigned to increasing categories. In the case of board member defeat, districts in which incumbents did not seek reelection were assigned to no board member defeat categories. Under this decision rule, 36 districts were assigned to no defeat categories. The exact number and the four-fold classifications are presented in Figure 1.

Insert Figure 1 about here

66 Districts-19 Indicators. The predictability rates for classifying the 66 districts into the four groups had a mean of 63%. The results are presented in Table 1. Inspection of the table indicates that

Insert Table 1 about here

misclassifications occurred most frequently in Groups 1 and 4. For instance, Group 1 districts (increasing indicators, no board member defeat) were misclassified most frequently into Group 2 (increasing indicators, board member defeat) but Group 4 districts (decreasing indicators, board member defeat) were also most frequently misclassified as Group 2 districts. Therefore, no unique clusters, such as increasing or decreasing indicator groups regardless of classification of board member defeats, could be found.

66 Districts-10 Indicators. Using those variables with the largest

Group 1	Group 2
(1) Increase in indicator variables and (2) No board member defeat N=10	(1) Increase in indicator variables and (2) Board member defeat N=15
Group 3	**Group 4**
(1) Decrease in some indicator variables and (2) No board member defeat N=26	(1) Decrease in some indicator variables and (2) Board member defeat N=15

Figure 1

Predicted groups created to examine the effects of decrease in some indicators for 1967, 1969, and 1971 school board elections

Table 1

Classification Matrix of 66 Districts
Using 19 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	6	3	1	0	10	60%
2	2	10	1	2	15	67%
3	1	1	17	7	26	65%
4	0	4	2	9	15	60%

Mean Predictability Rate 63%

discriminant function coefficients, a second analysis was performed. While the mean of the predictability rates was 60%, there were shifts in some classifications. The results are presented in Table 2. Group 1 had one

Insert Table 2 about here

more district correctly classified while Group 2 lost three districts which had previously been correctly classified. Again, no clustering, such as increase in indicators or board member defeats, seems to have occurred.

The indicator variables included all four concerning change in average daily membership, two involving changes in assessed valuation per average daily membership, and four political variables including ratio of votes against incumbents, ratio of candidates, incumbent index, and board election index.

66 Districts-5 Indicators. The final analysis reported used five indicators and resulted in a mean predictability rate of 48%. While Groups 1 and 4 fell dramatically from earlier analyses, only Group 3 (decreasing indicators, no board member defeat) remained stable over all three analyses. The indicator variables in this analysis dealt with change in average daily membership (1, 3, 4) and votes against incumbents (12, 13). The results are presented in Table 3.

Insert Table 3 about here

Summary. These three analyses produced neither high levels of predictability nor patterns which seemed to lead to further analyses. Combining classifications and misclassifications of increasing indicators,

Table 2

Classification Matrix of 66 Districts
Using 10 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	7	2	1	0	10	70%
2	4	7	1	3	15	47%
3	2	1	14	9	26	61%
4	1	2	3	9	15	60%

Indicators: 1, 2, 3, 4, 10, 11, 12, 13, 17, 19

Mean Predictability Rate 60%

Table 3

Classification Matrix of 66 Districts
Using 5 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	3	4	1	2	10	30%
2	3	10	1	1	15	67%
3	1	1	16	8	26	62%
4	2	3	5	5	15	33%

Indicators: 1, 3, 4, 12, 13

Mean Predictability Rate 48%

for example, did not produce striking patterns which might have aided further analysis. The indicator variables suggested that changes in average daily membership and voting patterns might be useful as predictors for some groups, but not all.

The Analyses of 44 and of 22 Districts

At this time, a second series of analyses were run. These analyses were based on changing the decision rules used for classifying districts.

The first change was of the decision rule concerning incumbents who did not seek reelection. An inspection of the data generated showed that in the 1971 school board elections some 22 districts had at least one incumbent candidate who did not seek reelection. According to information published by the New Mexico School Boards Association, 173 of the 453 local school board positions (38.2%) were open for election in 1971. Of the 89 school districts in New Mexico at that time, 77 had two or more school board positions up for election. Hence, two analysis series were run using districts in which all incumbents had sought reelection (N=44) and districts in which at least one incumbent did not seek reelection (N=22).

The second change was to analyze only the results of 1971 school board elections. These two changes in decision rules produced the following analyses.

<u>44 Districts--19 , 11, and 5 Indicators</u>. The first series of analyses used two groups. Using only 1971 election information, Group 1 included all districts in which incumbents sought reelection and none were defeated; Group 2 included all districts in which incumbents sought reelection but one or more were defeated (Figure 2).

Insert Figure 2 about here

Using all 19 indicator variables, the mean predictability rate was a 95%. However, with 11 indicators predictability rates fell to a 71% mean and with 5 indicators rates fell to 57%. In the 11 indicator analysis, seven were socio-economic and four political. In the 5 indicators analysis, all were socio-economic. The results of these analyses are presented in Tables 4, 5, and 6.

Insert Tables 4, 5, and 6 about here

22 Districts--19 Indicators. Using all districts in which at least one incumbent did not seek reelection, four groups were created. These groups were classified on the dimensions of (1) increase or decrease in indicator variables and (2) no board member defeat or at least one board member defeat. The groups and the number of districts in each are displayed in Figure 3.

Insert Figure 3 about here

The results of the first analysis using all indicator variables are presented in Table 7. All groups were predicted with complete accuracy (100%).

Insert Table 7 about here

22 Districts--10 Indicators. Using the 10 largest discriminant

Group 1	Group 2
Incumbents sought reelection and no defeat	Incumbents sought reelection and at least one defeat
N=30	N=14

Figure 2

Predicted groups created to examine the effects of removing incumbents not seeking reelection in 1971 school board election

Table 4

Classification Matrix of 44 Districts
Using 19 Indicators

Group	1	2	Total	Predictability Rate
1	29	1	30	97%
2	1	13	14	93%

Mean Predictability Rate 95%

Table 5

Classification Matrix of 44 Districts
Using 11 Indicators

Group	1	2	Total	Predictability Rate
1	23	7	30	77%
2	5	9	14	64%

Indicators: 1, 2, 3, 5, 6, 10, 11, 13, 15, 17, 19

Mean Predictability Rate 71%

Table 6

Classification Matrix of 44 Districts
Using 5 Indicators

Group	1	2	Total	Predictability Rate
1	17	13	30	57%
2	6	8	14	57%

Indicators: 1, 7, 8, 10, 11

Mean Predictability Rate 57%

Group 1

(1) Increase in indicators variables
and
(2) no board member defeat
and
(3) incumbent not candidate for reelection in 1971
N=4

Group 2

(1) Increase in indicator variables
and
(2) at least one board member defeat
and
(3) incumbent not candidate for reelection in 1971
N=2

Group 3

(1) Decrease in some indicator variables
and
(2) no board member defeat
and
(3) incumbent not candidate for reelection in 1971
N=14

Group 4

(1) Decrease in some indicator variables
and
(2) at least one board member defeat
and
(3) incumbent not candidate for reelection in 1971
N=2

Figure 3

Predicted groups created to examine the effects of decrease in some indicators and incumbent not seeking reelection in 1971 school board election

Table 7

Classification Matrix of 22 Districts
Using 19 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	4	0	0	0	4	100%
2	0	2	0	0	2	100%
3	0	0	14	0	14	100%
4	0	0	0	2	2	100%

function coefficients, a second analysis was performed. Again, the predictability rate for all four groups was 100%. Of the indicator variables used, eight were socio-economic and two were political. The results are shown in Table 8.

Insert Table 8 about here

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22 Districts--5 Indicators. The final analysis used three socio-economic variables and two political variables. The mean predictability rate was 87%. The results are shown in Table 9.

Insert Table 9 about here

Summary. By changing the decision rules concerning incumbents not seeking reelection and by using only a single election year (1971), mean predictability rates were generally higher than in earlier analyses. The next section explores possible reasons for these increases.

Discussion

This section presents one possible interpretation of the earlier sets of analyses. This interpretation rests upon the analyses of the 1971 school board election in the 44 districts in which all incumbents sought reelection and the 22 districts in which at least one incumbent did not seek reelection. Two major points will be stressed. First, there are different patterns of indicators in the 44 and 22 district analyses. Second, in the 1971 elections there was considerable turnover of school board members.

Incumbents Not Seeking Relection. The use of the decision rules

Table 8

Classification Matrix of 22 Districts
Using 10 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	4	0	0	0	4	100%
2	0	2	0	0	2	100%
3	0	0	14	0	14	100%
4	0	0	0	2	2	100%

Indicators: 1, 2, 3, 4, 5, 6, 10, 11, 12, 13

Mean Predictability Rate 100%

Table 9

Classification Matrix of 22 Districts
Using 5 Indicators

Group	1	2	3	4	Total	Predictability Rate
1	3	0	1	0	4	75%
2	0	2	0	0	2	100%
3	1	0	10	3	14	71%
4	0	0	0	2	2	100%

Indicators: 1, 2, 4, 12, 13

Mean Predictability Rate 100%

which reclassified districts in terms of incumbent choices of seeking or not seeking reelection in 1971 produced two major results. First, predictability rates were generally higher than those associated for the total sample. Second, a pattern of indicators emerged in analyses run with less than all 19 indicators. This pattern is most evident in the analysis using 10 and 11 indicator variables. This pattern included eight common indicator variables and a few unique variables. The information is displayed in Table 10.

Insert Table 10 about here

The common indicator variables retained in both analyses were: 1, 2, 3, 5, 6, 10, 11, 12, 13. These eight variables included three concerning per cent change in average daily membership (1, 2, 3), two dealing with per cent change in assessed valuation (5, 6), two covering the per cent change in assessed valuation per average daily membership (10, 11) and one reflecting a ratio of votes against incumbents to total votes in the 1967 board election (13). In the 44 district classification, the unique variables were: 15, 17, and 19. These variables dealt with the ratio of candidates to positions in the 1969 election (15), an incumbent index for the 1967 election (17), and a board election index for the 1967 election (19). In the 22 district classification, the unique variables were: 4, 12. The first indicator was the per cent change in average daily membership over the eight year period, 1961-2 to 1969-70, (4) and the second was the ratio of votes against incumbents to total votes in the 1969 board election (12).

The groupings of these indicator variables suggest a picture of generalized changes in districts on common socio-economic dimensions but

Table 10

Summary of Indicators Retained in Classification of Districts
Using Incumbent Reelection and 1971 Rules (*Retained)

Table #	5	8
Number of Districts	44	22
Indicators	11	10
Mean Predictability Rates	71%	100%
Number of Groups	2	4
Indicators		
1	*	*
2	*	*
3	*	*
4		*
5	*	*
6	*	*
7		
8		
9		
10	*	*
11	*	*
12		*
13	*	*
14		
15	*	
16		
17	*	
18		
19	*	

sharply differing interpretations by school board incumbents of political changes. In the 44 district sample, three political indicators remain. These indicators helped discriminate between districts in which defeat or no defeat took place in 1971. There were no unique political indicators in the 22 district sample. Such political indicators were not useful for discriminating districts in which incumbents either won or lost in 1971.

In the 1971 election, 18 districts had incumbent defeat. In the 44 district sample, 32% (14/44) of the districts had at least one incumbent defeat. In the smaller sample, 18% (4/22) suffered defeat. The actual number of defeats and the percentage difference between the two samples is large.

What these differences in political indicators and actual political outcomes may indicate is that the decision to not seek reelection may have been based on an accurate assessment of a changing political scene. Those incumbents who did not seek reelection were aware of and understood earlier political indicators (15, 17, 19) as symptoms of high probability of defeat. In those 22 districts in which incumbents did not seek reelection, these and other political clues had already been analyzed by incumbents and formed the bases for political retirement. The decision rule to separate out incumbents not seeking reelection thus included these political variables as a common, and non-discriminating, factor.

In the 44 districts in which all incumbents sought reelection, early political variables helped discriminate between incumbent victory and defeat. Incumbents in these districts may not have been aware of or misinterpreted the political process (15, 17, 19). Hence, those who suffered defeat could be correctly classified using earlier political signals. The

decision rule to exclude incumbents not seeking reelection in these 44 districts thus reintroduced the political variables. The interpretation suggested is presented schematically in Figure 4.

Insert Figure 4 about here

High Turnover. In the sample of 66 districts, some incumbent change (defeat or not seeking reelection) occurred in 36 districts (55%) in 1971. In 14 (21%) of the districts incumbents ran and lost. In 4 districts some incumbents ran and lost and other incumbents did not seek reelection (6%). In 18 districts (27%) incumbents did not seek reelection.

Summary. The sense which can be drawn from these two points suggests that school board members in some districts were alert to major political shifts which were occurring in their school districts. In other districts, other incumbents failed to heed or were unaware of these political shifts. These less alert incumbents suffered defeat nearly twice as often as their more alert counterparts. More importantly, however, in 1971 the majority of this sample was made up of districts in which at least one member of the school board changed. This rate of mobility suggests that boards may have been open both to their community and to potentially new demands on the schools. Linked to the earlier political awareness of some board members, in 1971 in New Mexico school board elections seem to indicate a close linkage between school and community in a majority of the districts in this sample.

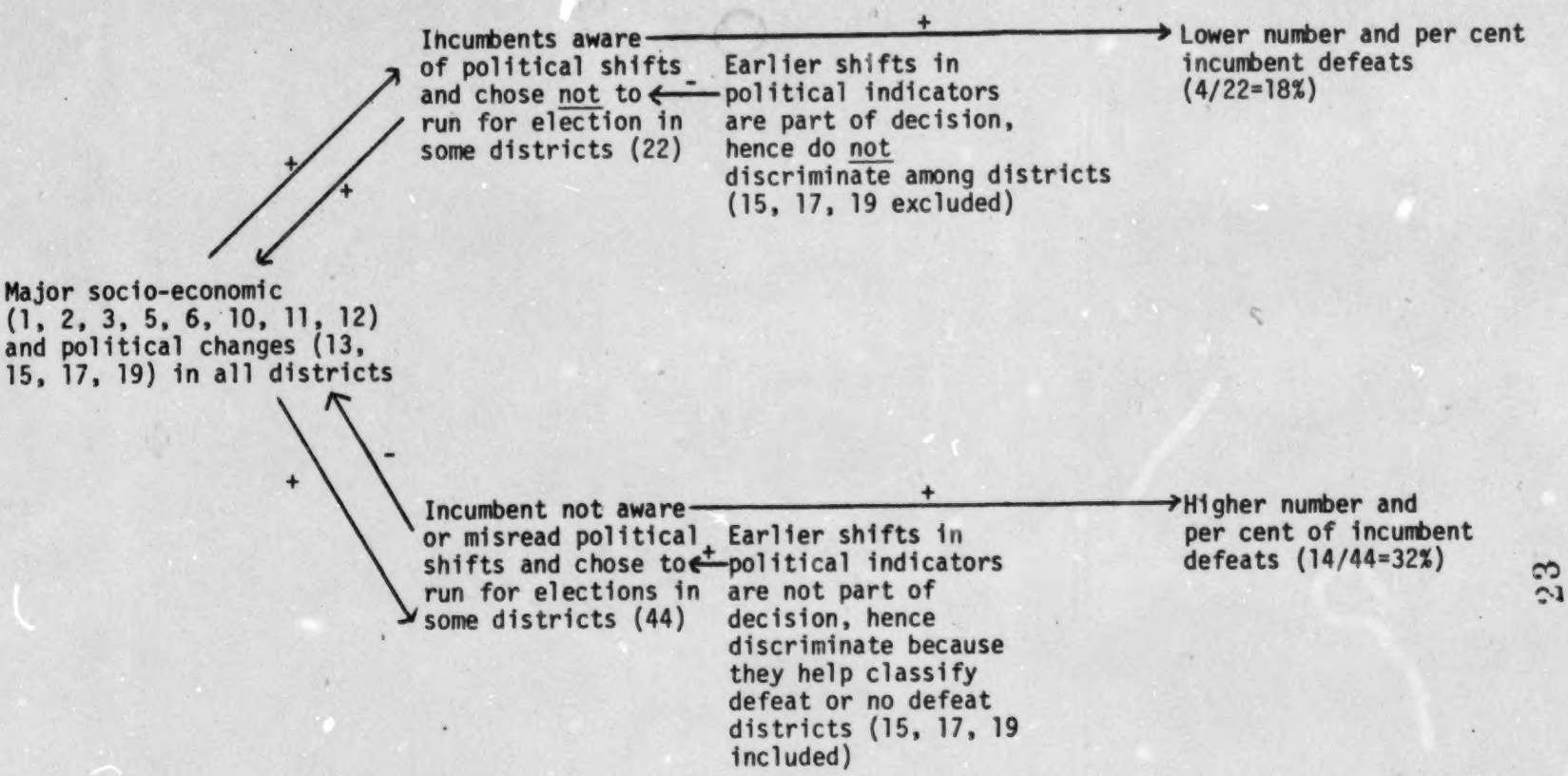
Incumbents aware of political shifts and chose not to run for election in some districts (22)
+
Earlier shifts in political indicators are part of decision, hence do not discriminate among districts (15, 17, 19 excluded)
-
+
Lower number and per cent incumbent defeats (4/22=18%)
Major socio-economic (1, 2, 3, 5, 6, 10, 11, 12) and political changes (13, 15, 17, 19) in all districts
+
+
Incumbent not aware or misread political shifts and chose to run for elections in some districts (44)
+
Earlier shifts in political indicators are not part of decision, hence discriminate because they help classify defeat or no defeat districts (15, 17, 19 included)
+
Higher number and per cent of incumbent defeats (14/44=32%)
-

Figure 4

Schematic interpretation

Footnotes

1. In the interest of avoiding needless repetition, for the theoretical framework, readers should refer to Laurence Iannaccone and Frank W. Lutz, Politics, Power and Policy: The Governing of Local School Districts. The particular work in New Mexico was Eugene P. LeDoux, "Outmigration: Its Relation to Social, Political and Economic Conditions and to the Governing of Local School Districts in New Mexico," unpublished Ph.D. dissertation, The University of New Mexico, 1971. Material from this dissertation was used in Eugene P. LeDoux and Martin Burlingame, "The Iannaccone-Lutz Model of School Board Change: A Replication in New Mexico," Educational Administration Quarterly, 9 (Autumn, 1973), 48-65. In turn, this article was critiqued carefully in Frank W. Lutz, "The Role of Explanatory Models in Theory Building: In Response to LeDoux-Burlingame," Educational Administration Quarterly, 11 (Winter, 1975), 72-78.

Appendix A

The Indicators

Socio-Economic Indicators

1. Percent change in average daily membership over three year period, 1966-7 to 1969-70
2. Percent change in average daily membership over three year period, 1964-5 to 1967-8
3. Percent change in average daily membership over the six year period, 1961-2 to 1967-8
4. Percent change in average daily membership over the eight year period, 1961-2 to 1969-70
5. Percent change in assessed valuation over the three year period, 1961-2 to 1964-5
6. Percent change in assessed valuation over the six year period, 1961-2 to 1967-8
7. Percent change in assessed valuation over the eight year period, 1961-2 to 1969-70
8. Change in assessed valuation per average daily membership over the three year period, 1966-7 to 1969-70
9. Change in assessed valuation per average daily membership over the three year period, 1964-5 to 1967-8
10. Percent change in assessed valuation per average daily membership over the three year period, 1966-7 to 1969-70
11. Percent change in assessed valuation per average daily membership over the three year period, 1965-6 to 1968-9

Political Indicators

12. Ratio of votes against incumbents to total votes cast in the 1969 board elections
13. Ratio of votes against incumbents to total votes cast in the 1967 board election
14. Ratio of candidates to positions in the 1971 board elections
15. Ratio of candidates to positions in the 1969 board elections
16. Ratio of candidates to positions in the 1967 board elections
17. Incumbent Index for the 1967 board elections
18. Board Election Index for the 1969 board elections
19. Board Election Index for the 1967 board elections